

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A transmitter comprising:

an input-side digital multi-port directional coupler configured to divide and combine
~~for dividing and combining~~ digital transmission signals of N channels by digital processing
and configured to output ~~for outputting~~ N -channel signals to N transmission channels,
respectively;

N predistorters inserted in said N transmission channels, respectively, ~~for linearizing~~
~~said N transmission channels~~ configured to provide compensating predistortions to the N -
channel signals outputted from said input-side digital multi-port directional coupler;

N transmitting parts inserted in said N transmission channels, respectively, ~~for~~
converting configured to convert output signals from said N predistorters to N high-frequency
signals of said N channels, each of said N transmitting parts including a power amplifier for
amplifying power of the high-frequency signal; [[and]]

an output-side multi-port power combiner configured to divide and combine ~~for~~
~~dividing and combining~~ said N high-frequency signals ~~of said N transmission channels~~ to
output N high-frequency transmission signals ~~for said N transmission channels;~~ and

N receiving parts configured to extract, from said N high-frequency signals, distortion
components produced by the power amplifiers and configured to generate, based on said
distortion components, compensating signals which control said N predistorters, wherein
based on said compensating signals, said N predistorters generate compensating
predistortions and impart said compensating predistortions to said N -channel signals,
respectively, to cancel the distortion components at said power amplifiers.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The transmitter of claim [[2]] 1, wherein
said N predistorters ~~of N channels~~ are digital predistorters configured to impart of N
~~channels for imparting~~ said compensating predistortions to said N-channel signals ~~of N~~
channel by digital processing, and which further comprises:

N digital-to-analog converters inserted in said [[of]] N transmission channels
configured to convert for converting the outputs from said N predistorters ~~of N channels~~ to
analog signals ~~of N channels~~ and configured to apply for applying said analog signals ~~of N~~
~~channels~~ to said N transmitting parts ~~of N channels~~, respectively; and

N digital-to-analog converters configured to convert of N channels for converting said
compensating signals from said N receiving parts ~~of N channels~~ to digital compensating
signals and configured to apply for applying said N digital compensating signals to said
digital predistorters ~~of N channels~~.

Claim 4 (Currently Amended): The transmitter of claim 1 [[2]], wherein said N
predistorters ~~[[of N]]~~ channels are analog predistorters, and which further comprises N
digital-to-analog converters inserted in said [[of]] N transmission channels configured to
convert for converting said ~~signals of N channels~~ N-channel signals output from said input
side digital multi-port directional coupler to analog signals for application to said N digital
predistorters ~~of N channels~~, said N receiving parts ~~of N channels~~ providing said
compensating signals to said N digital predistorters.

Claim 5 (Currently Amended): The transmitter of claim 3 or 4, wherein each of said
N transmitting parts ~~of N channels~~ includes:

an up-converting part configured to up-convert for the corresponding one of said ~~signals of N channels~~ N-channel signals to a high-frequency signal of the transmission frequency band; and [[a]]

the power amplifier configured to amplify for ~~amplifying~~ the power of said high-frequency signal and configured to apply for ~~applying~~ said power-amplified high-frequency signal to said output side multi-port directional coupler.

Claim 6 (Currently Amended): The transmitter of claim 3 or 4, wherein each of said N receiving parts of ~~N channels~~ includes:

a detecting part configured to detect for ~~detecting~~ the corresponding one of said high-frequency signals of said N transmission channels;

a band-pass filter configured to extract for ~~extracting~~ a distortion component by said power amplifier from said detected output; and

a control part configured to generate for ~~generating~~ said compensating signal based on said distortion component.